

REMARKS

The Office Action required affirmation of the provisional election of claims 1-25 and 28-36. The Office Action objected to the title and objected to claims 16-17. Claims 1-25, 28-36 were rejected under 35 U.S.C. 103(a) as unpatentable over US 20040054662 (hereinafter Work) in view of US 6980984 (hereinafter Huff).

Election of Claims 1-25 and 28-36

Applicants hereby affirm the election of claims 1-25 and 28-36.

Objection to the Specification

Applicants have amended the title and claims 16-17. Withdrawal of the objections to the title and claims is requested.

The Section 103 Rejection

Claims 1-25, 28-36 were rejected under 35 U.S.C. 103(a) as unpatentable over Work in view of Huff. The Office Action noted that, as for claims 1 and 25:

...Work discloses: augmenting the system's production rules based on a search strategy (See paragraph 0022 note user can specify whether or not to use the dictionary or thesaurus which in turn specify different search databases or engines).

Work differs from the claimed invention in that the disclosure of dynamically determining at run-time the selection or order of said resources according to the production rules along with the augmented production rules is a little convoluted. Huff however more explicitly states dynamically determining at run-time the selection or order of said resources according to the production rules along with the augmented production rules (See column 20 lines 29-39 note that the delimiters are used to map concepts which are used in turn to select queries, attributes to be ordered based on the context of the query (See column 19 lines 28-33)). It would have been obvious to an artisan of ordinary skill in the pertinent art to have incorporated the teaching of Huffs into the system of Work's. The modification would have been obvious because many time users must cross reference multiple online sources and databases, and user feel differently about

the reliability of each one. Allowing users to select different resources will lead to a more reliable search with better more concise results (See Work paragraph 0007).

Work relates to a method of data retrieval and presentation over a network that can include, responsive to an inquiry, querying at least one search engine in the network as specified by configuration attributes and the inquiry. References from the query can be received from the at least one search engine. The references can be processed according to research rules and a research model can be generated from the processed references.

Paragraph 22 stated:

[0022] The various data stores 115-130 specify configuration attributes which can be used to process received inquiries as well as received query results. The configuration attributes can include pre-configured data as well as user configured data. For example, the dictionary data store 115 can include predefined terms for a variety of standardized subject domains. Still, a user can add, remove, and/or edit terms as may be required according to the particular domains corresponding to search or research needs of the inquiring individual or organization. Thus, the dictionary data store 115 can include terminology and definitions specifying related terms and/or domains. The thesaurus data store 120 can include synonyms for various search terms or dictionary defined terms as well as other variants as may be determined by a user with reference to the particular domain to be searched. Notably, the dictionary and thesaurus data stores 115 and 120 can specify designated search engines 135. For example, the various entries within the dictionary data store 115 and the thesaurus data store 120 can specify or cross-reference search engines 135 to be used when searching for a term specified by the entry. The specified search engine can be more suited to the domain to which the entry is associated.

Work shows a system with conventional rules. This is similar to the prior art described in the application. As noted in the instant specification, Figure 1C "shows another conventional system that uses resource selection. In this system RES1 decides whether to run RES2 or RES3 next. However the decision is hard-coded and although this system may appear to have a behavior similar to a strategy, it is not since the rules are defined in advance. Similarly, in another conventional hard-coded search system, an

option decides if the second step is RES2 or RES3. Even though an option decides the selection of RES2 or RES3, this is not strategic searching since the behavior is defined in advance. Although the particular selection of resources might change based on if a condition is true or false, the rules are fixed in advance." Specification at page 6, lines 20-28.

In contrast, in one embodiment of the instant invention, the system of Fig. 1D changes the fixed behavior of the system of Fig. 1B into a strategic-based system by adding an extra input "search strategy," which can modify the default selection policy during run-time. The strategy might modify a small part, such as switching resources such as search modules RES2' 14 and RES3' 16 so that if a particular condition is false, the system dynamically makes the decision run RES2' 24 ahead of RES3' 26, for example. The unaltered parts remain the same - i.e. running RES1 first, choosing between RES2 and RES3, running the selected resource RES2 or RES3, then running RES4, for example. Although the sequence of executed resources shown in Fig. 1D happens to be identical to the default sequence, RES3 can be run ahead of RES2 based on the condition, for example. The search strategy, among other things might introduce new conditions not previously specified by the default rules. In Fig. 1D, information is searched in accordance with a specified strategy for a search system having a plurality of resources and production rules for using, ordering and/or manipulating those resources. Based on the strategy provided to the search system, the search system augments its production rules and dynamically determines at run-time the selection or order of said resources according to said production rules along with the augmented production rules. Work simply fails to show a search system that augments its production rules and

dynamically determines at run-time the selection or order of said resources according to said production rules along with the augmented production rules. Hence Work cannot render claim 1 obvious.

The Office Action relied on Huffman as showing the dynamically determining at run-the the selection or order of the resources according to the production rules. Applicants respectfully traverse the comparison with Huffman.

Huffman is similar to the prior art shown in Fig. 1C as discussed above. Huffman's decision is hard-coded. Although this system may appear to have a behavior similar to a strategy, Huffman fails to show the claimed strategy since the rules are defined in advance. As discussed previous, embodiments of the instant invention can modify the default selection policy during run-time. For example, the strategy might modify a small part, such as switching resources so that if a particular condition is false, the system dynamically makes the decision run one resource ahead of another, for example.

Huffman shows structured data attributes that are auto-mapped to a set of ordered concepts in a partially ordered taxonomy of a knowledge map representing a multidimensional organization of such concepts. A structured data attribute and/or an ordered concept is used to control the dialog, constrain a user's search, or order and present search results, either alone, or in combination with nonstructured (e.g., textual) data and/or one or more concepts that is not ordered using a structured data parameter. Huffman integrates the structured data before any user provider session or upon initiation of a user provider session and then is auto-mapped as follows in Huffman's Col. 20, lines 23-56:

Integration of structured data into content provider system 100 (e.g., to be associated with a user 105, a document or other knowledge container 201, or an instance of dialog during a user-provider session) may be accomplished in a number of different ways. In one example, structured data is uploaded into content provider system 100 in bulk before any user-provider session is initiated. In an alternative example, structured data is obtained dynamically upon initiation of a user-provider interaction session, or at a particular point therein, and then auto-mapped into one or more portions of ordered taxonomies.

The Huffman structured data is generated before the search or at a user session. However, the structured data of Huffman cannot correspond to the claimed augmenting the system's production rules based on a search strategy and dynamically determining at run-time the selection or order of said resources according to the production rules along with the augmented production rules. While Huffman shows obtaining structured data dynamically, such dynamically obtained structured data does not correspond to the determining at run time the selection or order of the resources (such as search engines, for example) according to the production rules along with the augmented production rules. Hence, Huffman fails to show dynamically determining at run time the selection or order of search resources.

In sum, neither Work nor Huffman, singly or in combination, can render claims 1 and 25, as well as those dependent therefrom calim 1 obvious. Further, Work and Huffman fail to show the specific recited element(s) recited in the dependent claims 1 and 25 as shown below.

Turning now to dependent claim 2, paragraph 0022 completely fails to show placing additional constraints on the production rules at run-time. Specific discussion of this aspect should be provided or the rejection should be withdrawn. As for claim 3, Applicants fail to fin in paragraph 0024 the discussion on "engines can be turned off or not search." Additionally, this does not equate to nullifying one or more of the

production rules at run-time. As for claim 4, paragraph 0022 mentions that “[t]he configuration attributes can include pre-configured data as well as user configured data.” However, the pre-configured and user configured data are formed before run time and thus Work is completely different from the claimed specifying the search strategy during run-time.

As for claim 5-9, Huffman fails to disclose the claimed search strategy as discussed above in response to the rejection of claim 1.

As for claim 10 Work fails to disclose the search strategy as applied to one of query processing resource, result processing resource and data resource.

As for claim 11 paragraph 0022 and paragraph 0028 of Work fails to disclose the search strategy and further fails to disclose dynamic determining is controlled in accordance with the search strategy and a system state.

As for claim 12, nowhere in Work does it disclose the system state comprises a query. Paragraph 0028 is simply irrelevant to the elements recited in claim 12.

As for claim 13, Work simply fails to show the system state with one or more messages passed among the resources. Work paragraphs 0029 simply mentions that “the research engine can generate and send queries based upon the initial inquiry” and paragraph 0030 states “[f]or example, from each of the target search engines, the research engine can receive a listing of references in response to the queries provided”.

As for claim 14-17, Work’s paragraphs 0029 shows that the research engine can generate and send queries based upon the initial inquiry. However, Work fails to show the search strategy and further fails to teach the claimed “modifying a query message

received from one of the resources during one of said search passes for use in a subsequent pass".

As to claim 15, paragraph 26 of Work teaches that the research engine can determine whether a relevant research model exists. However, Work fails to show the modifying the query message and the adding, deleting or changing of one or more keys in the query message.

As for claim 16, Work mentions recursive searching in paragraph 0029. However, Work fails to show the modifying the query message and further fails to disclose the modifying a data request received from one of the resources during one of said search passes for use in a subsequent pass.

As for claim 17, paragraph 26 of Work teaches that the research engine can determine whether a relevant research model exists. However, Work fails to show the modifying the query message and the assigning deleting or changing of one or more keys in the query message.

As for claim 18-19, Work's paragraphs 0038 and 0039 relates to summarizing information discovered as a result of the inquiry from a research model and to identify patterns within the research model. However, Work fails to show claim 18's adding a data request directed at one of the resources over a route and altering the route during one of said search passes for use in a subsequent pass. Further, Work fails to disclose claim 19's directing a query message at one of the resources over a route and altering the route during one of said search passes for use in a subsequent pass.

As for claim 20, Work paragraph 35 teaches that key relationships can be determined and within the research rules data store, the research rules can specify various

word relationships for which the research engine can search in the extracted text.

However, Work does not disclose the claimed specifics of locally routing a message received from one of the resources during one of said search passes for use in a subsequent pass.

As for claim 22, Work's paragraph 0039 mentions that the research engine can apply the research rules to the research model and formulate additional sub-queries to provide the target search engines and that the sub-queries can specify new combinations of search terms such as domain types, domain subtypes, and attributes as determined from the research rules and the relational graph. However, Work fails to disclose the claimed answering or generating one or more control messages received from one of the resources during one of said passes for use in a subsequent pass.

As for claim 23, Work's paragraph 40 discloses that the execution of exemplary pattern rules can generate sub-queries and the results of the sub-queries can be incorporated into the existing research model. However, this does not show the claimed updating a next pass condition received from one of the resources during one of said search passes for use in a subsequent pass.

As for claim 24, paragraph 0037 shows that the word and/or text associations identified within relevant text passages can be recursively identified within newly determined search results and recursively submitted to the various search engines to progressively acquire additional information. However, Work does not show optimizing a search result given the strategy and the production rules. In fact, the word "optimizing" is not used anywhere in Work.

Applicants take this opportunity to reiterate the requirement for a *prima facie* case of obviousness is helpful. Per MPEP 706.02(j): Contents of a 35 U.S.C. 103 Rejection

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP Section 2143 - Section 2143.03 for decisions pertinent to each of these criteria.

The initial burden is on the examiner to provide some suggestion of the desirability of doing what the inventor has done. "To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985). See MPEP Section 2144 - Section 2144.09 for examples of reasoning supporting obviousness rejections.

Here, the dependent claims are allowable because they recite features not shown in the references. Here, since Work fails to show the augmenting the system's production rules based on a search strategy; and dynamically determining at run-time the selection or

order of said resources according to the production rules along with the augmented production rules, Work cannot render the independent claims 1 and 25 obvious. Further, the claims are allowable since they include a number of elements that are completely missing from the cited reference.

Appellant points out that the Examiner bears the initial burden of factually establishing and supporting any *prima facie* conclusion of obviousness. *In re Rinehart*, 189 U.S.P.Q. 143 (CCPA 1976); M.P.E.P. § 2142. If the Examiner does not produce a *prima facie* case, the Applicant is under no obligation to submit evidence of nonobviousness. *Id.* In the instant case, the Examiner has not pointed to any evidence in Work, or how knowledge of those skilled in the art, provide a suggestion or motivation to modify the reference teaching so as to produce the claimed invention. See *In re Zurko*, 59 U.S.P.Q.2d 1693 (Fed. Cir. 2001) ([I]n a determination of patentability the Board cannot simply reach conclusions based on its understanding or experience - or on its assessment of what would be basic knowledge or common sense. Rather, the Board must point to some concrete evidence in the record in support of these findings).

Under *Vaeck*, absent any evidence of a cited suggestion or reasonable motivation in the Wolf reference, or knowledge of those skilled in the art, for arriving at augmenting the system's production rules based on a search strategy; and dynamically determining at run-time the selection or order of said resources according to the production rules along with the augmented production rules. Hence, *prima facie* obviousness of claims 1 cannot be established. As such, it is respectfully requested that the § 103(a) rejection of independent claim 1 and those dependent therefrom be withdrawn and the claims be allowed.

CONCLUSION

Applicants respectfully submit that all claims are in condition for allowance. Withdrawal of the rejection is respectfully requested.

If for any reason the Examiner believes that a telephone conference would in any way expedite prosecution of the subject application, the Examiner is invited to telephone the undersigned.

Respectfully submitted,


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